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ABSTRACT

The book discusses the teaching of gifted and talented students. The rationale behind special education programs for such students is reviewed, and the population in question is described and defined. The chapter on identification examines such instruments as group intelligence and achievement tests, teacher nominations, and creativity tests, and covers culturally different and minority students. Among the educational approaches for the gifted and talented reviewed are enrichment programs, ability grouping, and acceleration. Also covered are the costs of programs for the gifted and talented, the role of parents and community resources, and teacher preparation. Two scales designed to assist in the identification of the gifted and talented are appended, along with a bibliography. (DLS)

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Why Have Special Educational Programs for the Gifted and Talented?

A universal system of education is ultimately tested at its margins. It functions fairly well in educating most students in the middle or normal range of abilities, but has a tendency to be less effective with exceptional groups with either high or low abilities. Beginning in the late sixties, education policy makers in the United States committed themselves to the improvement of instruction for millions of previously neglected students through legislation aimed at the disadvantaged and handicapped. Less emphasis has been placed on improving instruction for those who possess exceptional ability or talent. These are the "extraordinary few" whose life work will improve their disciplines, their societies, and perhaps humankind.

The problem with instituting special programs for the gifted and talented in a public education system reflects democracy's perennial dilemma over championing excellence and equality simultaneously. If the emphasis leans too far toward excellence, there is the danger of creating a special kind of elitism; if it leans too heavily toward equality, there is a loss of outstanding potential, a leveling down to mediocrity.

There has previously been national concern with education of the gifted and talented. In 1957 the Soviet Union launched Sputnik, which resulted in an emphasis on improving instruction in the sciences, mathematics, and foreign languages—all of which are curriculum

areas that have been traditionally attractive to the intellectually gifted. However, in the 1960s the national concern shifted to the civil rights movement and education of the disadvantaged. More recently the handicapped (youngsters with impaired learning facilities, deaf, blind, emotionally and mentally disturbed, learning disabled, etc.) have become an educational priority. The steadily improving educational opportunities for the disadvantaged and handicapped need to continue, but at the same time it is necessary to recognize the exceptional needs of the gifted as well.

Numerous studies have established certain facts:

> Gifted and talented youth are a unique population differing markedly from their peers in abilities, talents, interests, and psychological maturity.
>
> They are the most versatile and complex of all the groups we serve in our schools, yet are the most neglected group when it comes to special educational needs.
>
> Their sensitivity to the existing school environment, which is focused on the average student, makes them especially vulnerable, with the result that they are likely to conceal their giftedness.

A 1971 report to Congress states:

> The relatively few gifted students who have had the advantage of special programs have shown remarkable improvements in self-understanding and in ability to relate to others, as well as improved academic and creative performance. The programs have not produced arrogant, selfish snobs; on the contrary, studies show that special programs have extended a sense of reality, wholesome humility, self-respect, and respect for others.

The gifted and talented typically can master the standard curriculum in one-third of the time other children take. The normal school curriculum calls for a ratio of 70/30 in time devoted to teaching basic skills and time devoted to higher cognitive learning (reasoning, drawing inferences, and reaching conclusions). The gifted child seems to need the reverse of this ratio. The regular school program is understandably geared to the norm or average; however, pupils who are advanced four or more years on the average beyond their contemporaries need to work with subject matter and ideas that are far beyond the capacity of their peers.

Numerous research studies have delineated the unique developmental growth and learning needs of gifted and talented students in academic, psychological, physical, and social terms. Academically gifted students mature faster in intellectual areas and consistently accumulate more academic skills and knowledge than average students. Thus, they differ more and more markedly from their peers as they progress in school. They learn with considerable independence and usually have special abilities and a rich diversity and breadth of interests. They frequently satisfy their curiosity by avid pursuit of interests through which they acquire a wide repertoire of skills and knowledge in other fields.

The advanced physical growth patterns of the gifted have been confirmed by the longitudinal studies begun by Lewis Terman in the 1920s. While his research tended to discredit the general stereotype of the "bright but little kid," a major problem for some gifted children is the disparity between their mental and physical growth. If the students have been accelerated, they may be the youngest in their grade and can be at a competitive disadvantage in some areas because of a lack of physical development.

In psychological growth there are vast individual differences among gifted students, but generally they are advanced for their age. Those who have worked extensively with the gifted describe them in these terms: independent in thought and work habits, perceptive, concerned about the truth, persistent, conscientious, devoted to distant goals, inquisitive, interested in the unusual, critical thinkers, inventive, endowed with intense powers of concentration and a long attention span, sensitive, empathic, idealistic, self-reliant, and versatile. The gifted are usually popular in social groups, and studies have shown that they are better adjusted than the average student. Often they are chosen as leaders and assume responsible roles in group activities. The gifted may demonstrate early and intense concern with social problems and ethical issues and move from self-concern to concern for others at an early age.

A 1971 report on gifted and talented made by the U.S. Office of Education reviewed the research related to education of the gifted and talented. It documented the special needs of this group and made a con-

servative estimate that there are 1.5 to 2.5 million gifted and talented children out of a total elementary and secondary population of 51.6 million. Fewer than 4% of those gifted students were benefiting from then existent school services. Special programs for the gifted had a low priority at virtually all levels of the educational system—federal, state, and local. Even in states where there were legal or administrative directives for providing special services, little was accomplished because of other funding priorities, more threatening crises, and the lack of adequately trained personnel.

Other reported difficulties in instituting special programs for the gifted included a lack of suitable measures for identifying gifted students and apathy or even hostility on the part of school staff. Of the schools surveyed during the 1969-70 school year by the U.S. Office of Education, 57.5% reported that they had *no* gifted pupils. Hostility toward the gifted may stem from those who are impatient with the "unusual" child or who assume that the gifted are a favored elite who deserve even less than normal consideration.

In recent years, however, there has been renewed interest in developing educational programs for gifted and talented students. The Office of Gifted and Talented (OGT) was established in the U.S. Office of Education, and in 1974 the Education Amendments Section 404 Public Law 93-380 (part of the Special Projects Act) was passed. This is the initial legislative authority for a program of categorical support for the population of gifted students and authorizes an annual appropriation of $2.56 million each year for three years. The program is designed to stimulate state programming for gifted and talented children and youth.

The gifted and talented are a natural resource that has been largely neglected and undeveloped. Contrary to widespread belief, these students ordinarily cannot reach their full potential without assistance. Intellectual and creative talent cannot survive educational neglect and apathy. It is in the national interest to assure the development of individuals who have the potential to make extraordinary contributions. The intellectual atmosphere in some high schools actually creates pressure on the gifted not to achieve, but to conform and underachieve. Some gifted students avoid taking special classes because teachers of

Who Are the Gifted and Talented and What Are They Like?

As a group, the gifted constitute a largely unidentified minority that cuts across all economic, social, racial, cultural, age, sex, and occupational segments of society. Before meaningful programs can be provided for gifted and talented students, they must be identified. How can giftedness be defined? The definition established by the U.S. Office of Education provides some general guidelines:

> Gifted and talented children are those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. These are the children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contributions to self and society.

The target population can be defined as the upper 3 to 5% of school-age children and youth who show outstanding promise in general intellectual ability, specific academic aptitude, creative or productive thinking, psychomotor ability, leadership, and achievement in the visual and performing arts. This definition reflects the trend away from the historical idea of giftedness as simply the ability to achieve high scores on an intelligence test.

Intensive studies of characteristics have been made over the past 50 years, beginning with Terman's monumental longitudinal work. A summary of his findings follows.

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Teaching the Gifted and Talented

By Marsha M. Correll

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those classes have a tendency to demand unreasonable investments of time for writing lengthy research papers. Good grades may be more difficult to obtain in special classes than in regular classes, and college-bound students must get the best grades they can in order to rank high in their class.

It has been charged that to a very considerable extent, those individuals who constitute that "creative minority" in our society have achieved their eminence in spite of, rather than because of, our school system. Among the gifted and talented are thousands who are capable of outstanding contributions, but whether their abilities develop fully depends to a great extent on their educational opportunities.

1. The average member of our group is a slightly better physical specimen than the average child.
2. The superiority of gifted over unselected children was greater in reading, language usage, arithmetical reasoning, science, literature, and the arts.
3. The interests of gifted children are many-sided and spontaneous; they learn to read easily and read more and better books than the average child. At the same time, they make numerous collections, cultivate many kinds of hobbies.
4. As compared with unselected children, they are less inclined to boast or overstate their knowledge; they are more trustworthy when under temptation to cheat; their character preferences and social attitudes are more wholesome, and they score higher in a test of emotional stability.
5. The deviation of the gifted subjects . . . is in the upward direction for nearly all traits. There is no law of compensation whereby the intellectual superiority of the gifted tends to be offset by inferiorities along nonintellectual lines.

Almost every researcher in the field since Terman has developed a list of traits that serve as a composite profile of the gifted and talented. Two such lists follow.

Some Learning Characteristics of Gifted Children

May V. Seagoe

Characteristics	*Concomitant Problems*
1. Keen power of observation; naive receptivity; sense of the significant; willingness to examine the unusual	1. Possible gullibility
2. Powers of abstraction, conceptualization, synthesis; interest in inductive learning and problem solving; pleasure in intellectual activity	2. Occasional resistance to directions; rejection or remission of detail
3. Interest in cause-effect relations and ability to see relationships; interest in applying concepts; love of truth	3. Difficulty in accepting the illogical

4. Liking for structure and order; liking for consistency, as in value systems, number systems, clocks, calendars	4. Invention of own systems, sometimes conflicting
5. Retentiveness	5. Dislike for routine and drill; need for early mastery of foundation skills
6. Verbal proficiency; large vocabulary; facility in expression; interest in reading; breadth of information in advanced areas	6. Need for specialized reading vocabulary early; parent resistance to reading; escape into verbalism
7. Questioning attitude, intellectual curiosity, inquisitive mind; intrinsic motivation	7. Lack of early home or school stimulation
8. Power of critical thinking; skepticism, evaluative testing; self-criticism and self-checking	8. Critical attitude toward others; discouragement from self-criticism
9. Creativeness and inventiveness; liking for new ways of doing things; interest in creating, brainstorming, freewheeling	9. Rejection of the known; need to invent for oneself
10. Power of concentration; intense attention that excludes all else; long attention span	10. Resistance to interruption
11. Persistent, goal-directed behavior	11. Stubbornness
12. Sensitivity, intuitiveness, empathy for others; need for emotional support and a sympathetic attitude	12. Need for success and recognition; sensitivity to criticism; vulnerability to peer-group rejection
13. High energy, alertness, eagerness; periods of intense voluntary effort preceding invention	13. Frustration with inactivity and absence of progress

14. Independence in work and study; preference for individualized work; self-reliance; need for freedom of movement and action	14. Parent and peer-group pressures and nonconformity; problems of rejection and rebellion
15. Versatility and virtuosity; diversity of interests and abilities; many hobbies; proficiency in art forms such as music and drawing	15. Lack of homogeneity in group work; need for flexibility and individualization; need for help in exploring and developing interests; need to build basic competencies in major interests
16. Friendliness and outgoingness	16. Need for peer group relations in many types of groups; problems in developing social leadership

Characteristics of Creative Children

Compiled by L. Lucito
from summaries by E. P. Torrance and J. Gallagher

1. View the world with extra wonder and see magic in it.
2. Learn by experimenting, manipulating objects in many ways, and using stories to exercise their imaginations at preschool age.
3. Are able to be conforming or nonconforming as the situation demands.
4. Try to find answers to their questions in their way.
5. Have extremely long attention spans and the ability to pursue an activity in which they are interested for extra-long periods of time.

6. Can tolerate disorder and ambiguity.
7. Are able to organize themselves and ideas.
8. Tend to see familiar things and situations in unusual ways and in greater depth.
9. Often prefer to learn by creative ways rather than being told by an authority.
10. Seem to learn considerably from fantasy as it aids in solving their problems of development.
11. Display a positive self-image.
12. Have an attraction toward the unconventional and toward complexity.
13. Seem to rely more on their own evaluations than on others'.
14. Come from family backgrounds characterized by a lack of overdependence on parents and a lack of stress on conformity by parents; strong feelings are expressed in the family; both fathers and mothers relate strongly and positively to the child even though the mother is ambivalent in her mothering feelings; more often than not, the most creative child is the older sibling; fathers are usually engaged in occupations allowing for autonomy and independence.
15. Build a reputation for having wild or silly ideas, particularly the boys.
16. Display humor, playfulness, and relaxation in their creative products.
17. Wish to work alone at times.
18. Are high academic achievers provided they have a minimum IQ score of around 120.
19. Can integrate opposing impulses such as destructiveness and constructiveness.
20. Select fewer conventional occupations (e.g., lawyer, doctor, professor) and select more unconventional ones (e.g., adventurer, inventor, writer).

Can We Identify the Gifted and Talented?

Identification of gifted and talented students continues to be one of the major challenges in setting up special programs for them. How do we find the gifted and talented students regardless of their environment or heredity, and how do we evaluate their abilities and talents?

A shift has taken place in the past 25 years regarding the concept of intellectual giftedness. Prior to the 1950s, instruments to measure intelligence tended to be standardized group or individual IQ tests. While high IQ scores generally correlate positively with academic success in school, some researchers began to question whether existing IQ tests could measure more than a narrow range of intellectual functions. Their research showed that intellectual functioning could be manifested in many ways besides academic school subjects or even high IQ scores. In particular, the "Structure of Intellect Model" developed by J. P. Guilford presented a fresh conceptualization of intellectual functions. His research focused on the quality of and kinds of thinking operations used in intellectual acts. He demonstrated that there are a number of dimensions of intellectual performance not measured by standard IQ tests. These include, in particular, divergent thinking (with its characteristics of fluency, flexibility, and foresight) and evaluative thinking. Studies were conducted comparing students who were good at tests of convergent thinking (high IQ) and those who were good at tests of divergent thinking (high creativity). The distinctions between the two

groups seemed to demonstrate a general personality style: one group represented intellectual acquisitiveness and conformity (high IQ), and the other group represented intellectual inventiveness and innovation (high creativity).

The research of Guilford and others into the structure of intellectual functions should alert us to the need to consider much more than IQ scores in identifying the intellectually gifted. It is essential that we use multiple criteria for identification if we are attempting to accommodate the variety of gifts and talents manifested in a multicultural society such as ours. Of course, procedures used to identify the gifted will vary according to the definition of giftedness adopted, the size and location of the school district, the available staff, and the proposed program.

Whatever methods of identification are utilized, it is of great importance that gifted and talented students be identified early. At the time of school entry, children are encouraged to conform and may hide superior talents and work at a minimum level of efficiency and accomplishment. For the gifted child, this actually is regression. If not discovered early and reinforced, gifts and talents could become lost or children may not develop the attitudes and motivation needed to make full use of their abilities. Discovery of talent is a continual process that must begin early and continue throughout a child's educational career.

Instruments of Identification

A successful screening and identification program has the following characteristics: early identification, continuing search, involvement of various professionals, use of multiple resource materials, and complete information on the abilities of the gifted student. Before a screening and selection system can be implemented, decisions should be made concerning the number of students to be involved in the program, the area or areas upon which the program will focus, and grade levels from which students will be selected.

The basic idea of screening is to use quick, simple procedures on large numbers of students to sort out those potentially qualified for a

special program from those who are not. The following steps in screening are suggested: intelligence and achievement testing; nominations by teachers, parents, peers, and self; creativity testing; and identification by experts in special areas.

Group Intelligence and Achievement Tests: Group tests of intelligence and achievement are useful as general screening instruments, particularly if both are used. They fail to identify some gifted students, and they occasionally identify some who are not gifted, but they provide useful information and are relatively inexpensive to administer. When used in combination with other procedures, they are effective screening devices. The younger the child, the less acceptable group tests are for identification of the gifted and talented. They may also penalize poor readers, underachievers, and culturally disadvantaged students (more on this later).

Teacher Nominations: Nominations by teachers is one of the most widely used and recommended means of identification; however, research findings indicate that teachers identify less than half of the gifted. There is a tendency for teachers to choose attractive, well-behaved, high-achieving, ambitious, and conforming children. They may overlook highly creative children who may be unkempt, outspoken, or not ambitious or academically inclined. The judgment of teachers is an important part of the screening process, but referrals must be reinforced by other more objective measures. Teacher participation in study and observation of characteristics of the gifted can be a valuable inservice training experience. When combined with other screening methods, teacher judgment increases the likelihood that certain students will not be overlooked. Nomination and selection of candidates for gifted programs should increase teacher interest in and awareness of their educational needs. Teacher identification is often made with the aid of checklists or rating scales in order to systematize the process. Rating scales should be used with full awareness of their limitations and should not require unusual demands on teachers' time. A widely used scale for nominating and rating pupils is one developed by Joseph S. Renzulli and Robert K. Hartman: "Scale for Rating Behavioral Characteristics of Superior Students." Sample items from this scale appear in the Appendix.

Nominations—Parents, Peers, Self, and Others: Parents, students, and others who have contact with a student frequently have an accurate assessment of that student's high capabilities, and their input should be solicited in the selection process. Parents may be able to provide information that is not always apparent to school personnel. Recognize, however, that parents can both underplay and overestimate their own child's ability. A variety of parent nomination forms exist. The Williams Rating Scale for teachers or parents appears in the Appendix of this fastback.

Students may also be asked to nominate themselves, but remember that many students tend to conceal their abilities very effectively. Also, the judgment of former teachers, principals, librarians, and other school resource personnel as well as people in the community can be utilized in the identification process.

Creativity Tests: Considerable controversy surrounds the use of tests intended to measure the creative abilities of children, because creativity is difficult to define and still more difficult to measure objectively. Creativity tests generally purport to measure divergent thinking—the development of new ideas, theories, and possibilities. Creativity measures include attention to such characteristics as fluency (number of responses produced), flexibility (shifts in thinking from one category of thought to another), originality, and elaboration (adding of details to a basic idea).

Judgment of Students' Work by Experts: Experts in music, art, dramatics, science, mathematics, creative writing, and other fields can aid in the identification process by offering evaluations of the work or creative products of students. These experts understand the qualities of complexity and originality inherent in the creative act. Involvement with and recognition by experts may also have strong motivational impact on the student.

Individual Intelligence Tests: It is generally accepted that if IQ tests are to be used at all, individually administered tests such as the Stanford-Binet or Wechsler Intelligence Scale are the best. Limitations include the time and cost of administration, lack of trained personnel to administer the tests, and some test items that penalize students with language or environmental handicaps. In any case, it is essential to

have a broader sampling of abilities than simply IQ scores in order to make an assessment of a student's qualifications for a special program for the gifted.

Culturally Different Gifted: A population that has frequently been overlooked and excluded from gifted programs is one that has been variously termed "culturally different," "disadvantaged," or "minority group." Culturally different gifted students are those who fall outside the mainstream of society's dominant culture and may include Native American, black, Chicano, female, rural, urban, or handicapped students. An invaluable natural resource is being wasted if the gifted in these special populations remain unidentified and understimulated. Many times failure to provide for these bright students leads to frustration and uncooperative behaviors. Separate checklists may facilitate identification strategies for this population. A rule of thumb commonly used in programs for the gifted and talented is to give the culturally different child a break by adding a 10-point margin of possible test error onto his or her test score. This should help the more able to qualify for the program.

Gifted and Talented Girls: Special attention is being paid to the changing role of women in society at this time, thereby highlighting the distinctive nature of gifted girls. Available information seems to suggest that gifted girls are more diffident and less intellectually aggressive in educational situations than gifted boys. Girls appear to lose interest in science and mathematics in particular as they get older, and parents seem to encourage boys in these interest areas more than they do girls. Such lack of encouragement in scientific areas may be the reason girls choose more artistic and social service types of occupations.

It is possible to identify gifted and talented girls with the currently existing measures. However, there needs to be a concentrated effort to increase the awareness level of educators and parents to help eliminate the discrimination resulting from sex-role stereotyping in the educational and occupational arenas. Early identification and intervention programs for gifted girls will help to reduce the loss of talent potential just as in other culturally disadvantaged groups.

Identification of the gifted is a process involving a series of steps

culminating in a case study whereby all information concerning a student's unique abilities, talents, traits, and special educational needs are collected. The case study should be cumulative and as complete as possible. All of the information garnered from the multiple procedures should be utilized for the final selection of participants to be enrolled in the gifted and talented program. Final selection should be made by a committee composed of the building principal, resource personnel who will direct the gifted program, teachers, experts in specific fields, and parents.

Educational Approaches for Gifted and Talented Students

Numerous types of programs have been developed and no one type of program is best for all gifted students or all schools. Each school system must plan and implement the program best suited to its own situation after considering the needs of its gifted and talented children and its monetary and manpower resources. Whatever type of program is selected, we must offer gifted children more flexibility with increasing amounts of independent work and greater freedom and responsibility in a less-structured environment than the average classroom. To prepare the gifted for responsible and productive roles in a democratic society, consider the following broad goals:

Superior Achievement—Gifted and talented youngsters should have ample opportunities to realize their potential to the fullest extent possible.

Self-Directedness—The freedom, responsibility, and capability to manage one's time is an important ingredient of self-fulfillment and productivity.

Acceptance of Responsibility—The leadership capabilities of gifted and talented pupils implies increased responsibilities to self, home, and society.

Creative Thinking and Expression—This goal seeks the development of creativity in a rich variety of constructive ways.

Aesthetic Awareness—This goal focuses upon the development of positive feelings toward things of beauty and consequence.

Acceptance of Divergent Views—This goal views tolerance for divergent thought as an aid to learning.

Pursuit of Alternative Solutions—This focus is on development of patterns of thinking which seek alternate solutions to problems prior to action. It seeks the development of a capacity for reasoning and effective decision making.

Commitment to Inquiry—The development of a pattern of thinking is stressed which continually questions, probes, tests, and investigates.

Preparation for Satisfying Life-Style and Career—The need for a gifted and talented person to enter into a career that is commensurate with his abilities, interests, and spiritual satisfaction is understood.

Effective programming for the gifted should take into account their emotional and social development along with their intellectual needs. Opportunities need to be provided for them to acquire basic skills and explore ideas and issues earlier and at a faster rate than their age-mates. In addition, they need to satisfy their unusually high desire for self-fulfillment; to find productive ways of expressing their unusual multiple talents and versatility; to receive special guidance in making choices and plans appropriate to their accelerated rates of personal growth and development; and to be exposed to a wide variety of learning experiences in and out of a formal school setting.

A distinction needs to be made between "provisions" and "programs." Provisions are offered by numerous schools through enrichment or acceleration within the regular classroom. These may be sporadic, uncoordinated, short-range efforts, and a big problem is lack of continuity. Programs, on the other hand, are directed toward the systematic development of long-range goals that are coordinated to develop the abilities and competencies of gifted pupils from the time of their identification through their graduation.

Efforts at schooling intellectually superior students over the last 50 years fall into four major types: enrichment, grouping, acceleration, and guidance. These provisions are not mutually exclusive but are frequently interrelated as visualized in the chart below from the publication, *Providing Programs for the Gifted and Talented* by S. Kaplan of the Ventura County, California, schools.

ENRICHMENT

ENRICHMENT is any experience that replaces, supplements, or extends instruction normally offered by the school.

GROUPING	ACCELERATION	GUIDANCE
Provisions that facilitate the student's access to special learning opportunities	Activities that promote learning beyond regularly prescribed curriculum	Experiences that promote understanding of the self and others and explore opportunities for careers
Cluster grouping within the regular class	Early entrance or preschool classes	Individual conferences
Special regular classes	Double grade promotion	Group meetings
Part-time groups before, during, after school or on Saturdays	Advanced placement classes	Career and vocational counseling
Seminars	Ungraded classes	Educational counseling
Minicourses	Multi-age classes	Community programs and sponsorship
Team teaching	Tutoring	Scholarship societies
Alternative schools	Correspondence courses	Study groups
Resource room or demonstration classroom	Extra classes for extra credit	Special education classes
Itinerant or resource teacher	Credit by examination	Tutoring
Field trip and cultural events	Independent study	
Special summer programs	Continuous progress curriculum	
	Year-round school	
	Flexible scheduling	
	Block or back-to-back classes	

Enrichment

For many years the standard answer to programming needs for gifted children has been "enrichment," which may involve the use of extra and/or different materials, assignments, and pupil projects. In some cases all teachers are expected to provide enrichment for gifted children in heterogeneously grouped classes. For this to be a reality rather than an illusion, certain requirements must be met:

1. Each classroom teacher must identify and list the students who are gifted.
2. Each classroom teacher must make specific curricular modifications for each bright youngster.
3. Someone must have supervisory responsibility for the entire program, helping classroom teachers in the identification process and providing motivation, ideas, and materials as the program progresses.

Individualization of instruction for all students is one type of enrichment that has resulted in a variety of formalized programs geared to the educational needs of each child rather than to an "average class." Less formal programs also exist, but all require a variety of materials to provide a stimulating learning environment. If given the opportunity and necessary direction, gifted and talented students will usually be capable of individualizing their own instruction and independent study.

One of the basic problems in planning enrichment programs for the gifted in the regular classroom is the practical limitations of the teacher who attempts to work with students of diverse talents and interests. One solution is the use of outside resource people with the expertise to present material at a greater depth. Such programs are particularly valuable for creatively gifted youngsters and for gifted students from culturally disadvantaged backgrounds. Persons without formal education who have outstanding talents and the ability to inspire gifted children from their own cultural background should be brought into the school program. Also, successful citizens, such as scientists, business men and women, and artists can add to the limited experience of the gifted students.

An innovative program for young gifted children in San Francisco uses the resources of the California Academy of Sciences, the Steinhart Aquarium, and the Morrison Planetarium. Gifted fifth-graders are trained by the museums' staffs to be "docents" or volunteers who guide visitors through exhibits. The docents study the museum exhibits with purpose and enthusiasm, since they will later serve as guides for their peers.

The Executive High School Internships Program operated by the Academy for Educational Development in New York City offers avenues for exploration of possible career options and community service. The program is in operation in 30 school districts in 18 states. Approximately 2,500 students participate each year. Executive High School Interns are juniors and seniors who take a semester's sabbatical from all their regular studies and serve as special assistants to senior officials in government, private nonprofit agencies, civic organizations, educational and cultural institutions, mass communications, and the private sector. Interns attend policy meetings and conferences with their sponsors, follow up on special assignments, prepare memoranda and reports, and occasionally even travel with their sponsors.

Interns are with their individual sponsors four days a week during regular business hours. On Fridays all of the interns meet as a group for seminars on executive behavior and organizational analysis, in which they discuss readings, meet with officials, make site visits to programs in operation, and often make their own presentations. Interns are required to keep analytical daily logs of their activities and to present projects to their high schools at the end of the semester to demonstrate what has been learned in the program. Executive Interns are not paid; however, they do receive a full semester of academic credit for their participation.

Differentiating curriculum for the gifted and talented requires special enrichment programs that will provide students with skills in methods of learning and knowing rather than in acquiring packages of facts. These programs include learning techniques of research (library and field), critical thinking and analysis, and means for sharing findings with associates. Curricula designed for the gifted should be different in their greater stress on advanced conceptualization and

important ideas. The primary goal for educating the gifted and talented is to help them become independent learners.

Grouping

Ability grouping continues to be a controversial subject among educators and the lay public. Questions have been raised concerning the possible negative social effects of segregating either the slow or the bright students. Opponents of ability grouping for the gifted argue that we may be creating an intellectual elite. Proponents of grouping suggest that such an arrangement permits gifted children to work among peers who will serve to stimulate and challenge each other intellectually. The debate will not be resolved in this fastback. (For a fuller discussion of the issue, see Phi Delta Kappa fastback #66, *The Pros and Cons of Ability Grouping*.)

In a number of school districts special classes or special schools have been established for gifted and talented students. Some of these take the form of partial segregation with special classes for gifted students once or several times a week. A common practice is to "mainstream" the student four-fifths of the time in the regular class, with special programs one-fifth of the time. A variety of grouping schemes is possible:

1. Cluster grouping within the heterogeneous classroom (involves the establishment of work groups within a regular class that puts children of similar ability together)
2. Part-time groups that meet before, during, or after school or on Saturdays (out-of-school activities based on interests or abilities sponsored by the school or by interested parties from outside the school)
3. Part-day special grouping of gifted students in homogeneous classes for certain subjects or activities while in other subjects they attend heterogeneous classes (may include resource room or demonstration centers)
4. Special homogeneous classes (gifted mix with regular students only for nonacademic tasks; school-within-a-school concept)
5. Special school for the gifted (ability grouping carried to its extreme)

Some special programs for the gifted are described below.

Talcott Mountain Science Center is a private, nonprofit corporation that conducts science education programs for various school districts throughout Connecticut. The center conducts Saturday programs for intellectually gifted students with high interest and ability in science. The students are recommended for the program by the surrounding public and private elementary and secondary schools. Through individual study the students develop projects in the areas of astronomy, ecology, chronobiology, meteorology, radio electronics, and seismology. Scientists within the community help, using educational facilities in nearby university science departments. The program also allows older gifted students to serve as aides to the younger students, for which they receive free tuition and use of the facilities. The program cost is $200 per student per semester, of which two-thirds is reimbursed to the local school district by the state.

Each summer 400 high school juniors and seniors from Georgia are chosen to spend eight weeks on the Wesleyan College campus. All participate at state expense in an exemplary instructional program. Selection for the experience is based on a teacher's nomination and the submission of records and recommendations. Final selection is made by a statewide committee after personal interviews. Instruction is in the areas of English, modern foreign languages, mathematics, natural sciences, social sciences, visual arts, drama, and music. Course content is idea-centered and stresses the integration of knowledge. Courses offered vary according to student interest, student need, and current affairs. No grades are given and no credits are awarded.

Educational Service District 114 in the state of Washington has scheduled "Experiences in Creativity," a series of five-day workshops for gifted high school and junior high students from throughout the state. Topics include poetry/fiction, visual arts, futures, drama, and dance. Instruction is by professional artists.

Resource rooms or demonstration centers are another way of scheduling students into a learning environment specifically tailored to the needs of the gifted and talented. The Cupertino (California) Extended Learning Center, begun in 1972, has a staff of four resource teachers and two aides who teach approximately 700 students a week. The stu-

dents are transported to the center by their parents from schools throughout the district. The four teachers not only manage, plan for, and guide the children while they are in the center but also spend half their time working with the students' teachers in their home schools. The students work in four basic curriculum interest centers: language arts, social studies, mathematics, and science. Primary students rotate through eight areas during a four-week period. Intermediate students select two areas in which to work for six-week periods. Parents and other members of the community are used as resources in the interest centers.

District 20 Gifted Center is a program located on the campus of Chicago State University and serves 125 students per week in grades 4 to 8. The program uses three teachers as well as many college professors, who volunteer their time to teach specific subjects. The students attend the program one day per week and must provide their own transportation. The college provides advanced research facilities such as the library, which students may use freely. This program for the gifted is basically research- and independent study-oriented, but also includes group activities that vary from day to day depending on student ability and interests.

Special schools for gifted students are less common than special classes. New York City has for many years maintained separate high schools for students with high ability in fine arts, performing arts, and science. The six schools are: Stuyvesant, Bronx School of Science, Brooklyn Technical High School, Hunter College High School, the High School of Music and Art, and the High School of Performing Arts. Hunter College Elementary School for gifted children is also in New York City.

Acceleration

Gifted children tend to develop more rapidly than their age-mates, and acceleration is one means of providing suitable challenges for them, offering work at a level compatible with their stage of development rather than their chronological age. Subject matter acceleration or grade acceleration is "vertical." It allows students more freedom to progress at their own rate and, hopefully, avoid boredom and unnecessary repetition of materials already learned.

Educators do not recommend simply rushing students through the regular curriculum at a faster rate, but suggest that acceleration be used in conjunction with an enriched curriculum. A two-year limit to acceleration is generally accepted, although the Study of Mathematically Precocious Youth (SMPY) at Johns Hopkins University has reported acceleration of up to four years. SMPY reports that all who have skipped grades had good personal adjustment and no appreciable academic difficulties. Acceleration can and has been practiced at all levels—from kindergarten to the university. It can be a valuable adjunct to enrichment and grouping.

Another aspect of acceleration is early admission. Early admission programs recognize that readiness for learning does not occur for all children at the same age. Despite many studies suggesting its advisability, most school systems still adhere to rigid admissions policies that fix the point of school entry at an arbitrarily determined chronological age. For many years educators and the public have equated acceleration with grade skipping. Research has indicated both teachers and school administrators express strong opposition to acceleration of the gifted in the belief that the gifted are better off with children of the same age. The assumption may be erroneous in that, on the average, the gifted and talented are better matched socially and emotionally with able students who are older.

Many secondary schools participate in advanced placement programs that allow academically talented, college-bound students to take college-level courses during their last year of high school. Cooperating colleges may grant credit and/or advanced standing to students who successfully complete such courses. Research conducted at Johns Hopkins University in the SMPY indicates that acceleration in mathematics may be vastly preferable for highly precocious youngsters to most types of enrichment. Some of the students skipped one or more school grades, some entered college early, many took college courses for credit on a part-time basis, and many studied in special courses. Julian Stanley, director of SMPY, describes some of his students:

> Two boys skipped from sixth to eighth to tenth grades. At age 14, the older of these entered Johns Hopkins as a full-time student at the end of the tenth grade. He had already taken six college courses: computer sci-

ence in the Johns Hopkins day school at age 13, earning an A; set theory, economics, and political science at a local state college; and two semesters of chemistry. Also, he had earned four semester-hour credits in calculus and 10 in physics by scoring well on Advanced Placement Program Examinations.

Acceleration may not be the best course for every gifted child and should not be applied automatically. There must be consideration for unsatisfactory home situations, problems of motivation, and general emotional adjustment.

Any special programming efforts for gifted and talented students must always overcome the egalitarian view that equality means giving the identical program to all children, regardless of their background or level of development. Differentiated curriculum and individualized educational plans may sometimes be construed as "special privileges for special people."

The Role of Parents and Community Resources in Education of the Gifted

Parents can and do contribute much to the education of the gifted and talented in both formal and informal ways. The attributes of outstanding intellectual and creative talents may be nurtured and stimulated or stifled and repressed, depending upon the atmosphere in which the child is reared. Parents are a primary force in their child's education. Their participation is important in the areas of motivation, reinforcement, and enrichment.

Research on adults with outstanding accomplishments has revealed similar parental influences: Their abilities were noted when they were quite young; their talents were nourished and encouraged. Family expectancy and example also influence children's achievement both in and out of school. Important features in the atmosphere of the home associated with high achievement are: the provision of a warm and accepting relationship with others; social contact with other families to provide opportunities for interaction with children of varied ages and abilities; stimulation of curiosity through meaningful contacts with cultural, natural, and social aspects of the world; early opportunities to develop responsibility for citizenship; provision for time alone for quiet reflection; encouragement of independence and interest in solving problems by challenging the child to think; training for responsibility in decision making with family situations; and involving the gifted child in community events to challenge his or her energies, talents, and intelligence.

Homes and schools each have unique functions that must be maintained and respected, but there remain large areas for cooperative endeavor. To equip parents to function as facilitators in the education of their gifted children, workshops could be planned on principles of child growth and development, ways to enhance creativity, language development, and parent-child interaction patterns.

When considering enrichment of the learning experience for gifted students, local community resources can play a vital role. Matching gifted students with material and human resources in the community is a means to increase the involvement and support of the community in local school programs. Some suggested resources include:

Industry: engineers, architects, chemists
Local colleges and universities: faculty offered enrichment classes
Special interest groups: Audubon Society, League of Women Voters, art guilds
City, county, and state officials and institutions
Professionals: doctors, lawyers, bankers, professors, horticulturists.
Talented parents or faculty
Students
Local service clubs
Foreign student exchange
Museums and libraries
Vocational and technical schools
Newspaper, radio, and television stations

Using community resources for a gifted program can compensate to some extent for the lack of school funds for special resources and equipment. It has been lamented that community personnel resources are not more widely used to augment and supplement an educational program that they support with their tax dollars. People involved in the arts, science, humanities, business, industry, and the professions in a community have an interest in sharing their knowledge, skills, and vision of the future with young people.

The gifted and talented frequently need special help with career decisions. This help can best be obtained by direct contact with people in a career. If the school is willing to allow time for this experience,

career resource persons are usually accessible even in small communities. For girls particularly, special attempts need to be made to locate professional women who can interact from the viewpoint and experience of a woman in a career field. Effective career development programs for gifted and talented youths must extend beyond the four walls of the school in order to provide one-to-one contacts between them and gifted individuals in various occupations. This is particularly helpful when dealing with life-style questions asked by gifted and talented students.

What Teacher Preparation Is Needed?

The teacher is undoubtedly the key to effective programs for gifted and talented students. Successful programs have demonstrated that special preparation for teachers is mandatory. Teachers who have such preparation tend to be sympathetic toward these students and to provide them with appropriate learning opportunities.

Research indicates that teachers with no special background are uninterested in and even hostile toward the gifted. Studies have shown that direct experience with students in programs for the gifted and participation in inservice programs produce more favorable attitudes in teachers toward both gifted children and their special programs. A change in teacher attitude has been reported after just one introductory course on the gifted child that included historical background, empirical findings, identification techniques, and intervention programs. Even when teachers of the gifted were carefully selected to represent the highest level of professional competency, their teaching performance could be significantly improved through inservice study. Desirable changes in the quality of learning, communication, subject matter content, and diversity of classroom experiences resulted. Other benefits reported by teachers after inservice study have included improved teaching skills, knowledge of subject matter, and appreciation of the needs of the gifted.

Probably the most widely recognized training programs for educating the gifted are those sponsored by the National/State Leadership

Training Institute (LTI). The LTI is funded by the U.S. Office of Education under contract to the office of the superintendent of schools in Ventura County, California. Much of the effort of LTI had focused on summer and regional leadership training institutes. The goals for LTI for the first three years (1972-75) were developing leadership within each state to launch programs. The current emphasis is support and reinforcement of leaders trained to continue efforts for gifted children. The type and scope of services include planning of co-sponsored conferences; short-term workshops; handbooks; a monthly publication (NS/LTI BULLETIN); contractual services for long-term workshops (two years) covering curriculum development, planning, inservice training, materials development, and parent involvement; follow-up workshops; final program planning; and work with parents, teachers, administrators, counselors, psychologists, the media, governmental agencies, business and industry, performing arts groups, and other professional organizations.

What Do Effective Programs for the Gifted and Talented Cost?

The introduction and maintenance of any special program for the gifted and talented will entail some extra costs. These costs have been magnified by persons antagonistic to such programs, while those supportive of the idea maintain that costs are not high when compared with the costs of other special programs. A survey completed in 1970 indicated that special programs for the gifted child cost less than $100 per child over the average per-pupil expenditure.

The special financing required for programs for gifted and talented students will depend on the educational resources that currently exist and on the kind of program that is anticipated. School systems that already include a comprehensive pupil testing program, well-equipped library facilities and abundant supplementary learning materials, an effective guidance and counseling program, and teachers informed and eager to individualize instructional procedures will require less extra funding. If the anticipated program calls for gifted students to be placed in separate classes or even buildings, costs would be considerably greater. The costs for individual assessment of children to determine eligibility is a legitimate charge in establishing a program for the gifted. If a consultant works with teachers in the interest of the gifted, often there is a "spillover" effect to other students from the improved attitudes and procedures of the teachers who have participated in special training programs. Six cost areas need to be con-

sidered when budgeting for the extra costs incurred in educating the gifted and talented at the local district level. These include administration; supervision; consultancies; teaching; instructional facilitation; pupil identification, assessment, evaluation, and counseling; and program evaluation. The costs within these categories can range from those needed for a minimal program to those appropriate to a full program.

Administration. Administrative costs to be considered are the time of the superintendent and building principals and their involvement in program planning, implementation, and continuing maintenance. It has been estimated that the maximum costs for central administration be 5% to 10% at the planning and implementation stage and no more than 2% to 3% thereafter. The costs of a principal's involvement in the building in which the program operates may range from 10% to 20%, with the higher figure for planning and implementation and the lower figure thereafter. Where a qualified consultant for the program is involved, the principal's percentage of time would be decreased.

Supervision. Supervisory costs are difficult to separate from administrative costs, since persons designated as supervisors in many school systems have both supervisory and administrative responsibilities. No more than 10% and 5% respectively should be chargeable to the gifted program.

Consultant. All the cost of the consultant, including salary and district travel, is chargeable to the program, but this expenditure should materially reduce the costs of administrative and supervisory personnel.

Teaching. Costs to be considered may include: costs of special in-service institutes and courses paid for by the district; expenditures for tuition and scholarships for teacher preparation; and reimbursement to program teachers for travel to demonstration centers, special conferences, workshops, etc.

Instructional facilitation. Provisions in this category must contribute directly to the enhancement of the learning experiences of the gifted and talented in the classroom. Examples might include teacher aides, specialists and outside consultants to provide supportive or elaborative learning opportunities, special courses for students, trans-

portation, and special learning materials. These materials may be initially purchased for the gifted, but later may be used by other students. Therefore costs will increasingly be included in regular instructional costs.

Pupil identification, assessment, evaluation, and counseling. The extra costs for these services will depend on the gifted program to be inaugurated and the basic education program already provided in the district. For example, group testing costs will vary from high when initiating and maintaining a gifted program in a district that has no group testing to low in a district that already has a relevant and contributory group testing program. Each candidate needs to be assessed to determine his or her strengths and weaknesses, potentials for learning, and levels of achievement. Assessment is an ongoing process. Costs for counseling services would need to be determined in terms of the proportion of time specifically devoted to the gifted and talented. This will vary from the adjustment counseling at the elementary level to an emphasis on occupational counseling and guidance at the junior-senior high level.

Program evaluation. Educational accountability and state requirements for specially funded programs make this category necessary. Its cost should be about 3% of the total estimated cost of the program.

Appendix

The two scales that follow were designed as instruments to assist in the identification of gifted and talented.

Scale for Rating Behavioral Characteristics of Superior Students

© by Joseph S. Renzulli and Robert K. Hartman

(Sample items from this scale are reprinted below with the permission of the authors.)

Name _____ Date ____ Grade ____

School _____ Age ____ ____
Years Months

Teacher or person completing this form _____

How long have you known this child? _____ Months

Directions. These scales are designed to obtain teacher estimates of a student's characteristics in the areas of learning, motivation, creativity, and leadership. The items are derived from the research literature dealing with characteristics of gifted and creative persons. It should be pointed out that a considerable amount of individual difference can be found within this population; and therefore, the profiles are likely to vary a great deal. Each item in the scales should be considered separately and should reflect the degree to which you have observed the presence or absence of each characteristic. Since the four dimensions of the instrument represent relatively different sets of behaviors, *the scores obtained from the separate scales should not be summed to yield a total score.* Please read the statements carefully and place an X in the appropriate place according to the following scale of values.

1. If you have *seldom* or *never* observed this characteristic.
2. If you have observed this characteristic *occasionally.*
3. If you have observed this characteristic to a *considerable* degree.
4. If you have observed this characteristic *almost all of the time.*

Space has been provided following each item for your comments.

Scoring. Separate scores for each of the three dimensions may be obtained as follows:

Add the total number of X's in each column to obtain the "Column Total."

Multiply the Column Total by the "Weight" for each column to obtain the "Weighted Column Total."

Sum the Weighted Column Totals across to obtain the "Score" for each dimension of the scale.

Enter the Scores below.

Learning Characteristics ..... _____

Motivational Characteristics ..... _____

Creativity Characteristics ..... _____

Leadership Characteristics ..... _____

PART I: LEARNING CHARACTERISTICS

1	2	3	4

PART II: MOTIVATIONAL CHARACTERISTICS

1	2	3	4

PART III: CREATIVITY CHARACTERISTICS

1	2	3	4
1	2	3	4

1. Displays a great deal of curiosity about many things; is constantly asking questions about anything and everything.
2. Is a high-risk taker; is adventurous and speculative.
3. Displays a keen sense of humor and sees humor in situations that may not appear to be humorous to others.
4. Is sensitive to beauty; attends to aesthetic characteristics of things.
5. Criticizes constructively; is unwilling to accept authoritarian pronouncements without critical examination.

Column Total

Weight

Weighted Column Total

TOTAL

PART IV: LEADERSHIP CHARACTERISTICS

1. Carries responsibility well; can be counted on to do what he has promised and usually does it well.
2. Is self-confident with children his own age as well as adults; seems comfortable when asked to show his work to the class.
3. Can express himself well; has good verbal facility and is usually well understood.
4. Tends to dominate others when they are around; generally directs the activity in which he is involved.
5. Participates in most social activities connected with the school; can be counted on to be there if anyone is.

1	2	3	4
Column Total			
Weight	1	2	3	4
Weighted Column Total				
TOTAL				

The Williams Scale

© by Frank Williams.
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A teacher-parent observational scale for rating thinking and feeling characteristics of potentially gifted and talented students (children)*

Name _____ Date ____ Grade ____
School _____ Age _____
Years Months

Teacher or person completing this scale _____
How long have you known this student? _____

Directions for Use of the Scale. There are eight (8) observational factors upon which this scale is based. Under each you will find six (6) characteristics for observing a student's behavior within the factor. These are specific ways to look at students who may be gifted and creative. Consider all six characteristics and check as many as apply to your observations of the student. Check the characteristics in this way:

Double check (✓✓) those items under each of the eight factors if the characteristic is observed *most of the time to a considerable degree.*

Single check (✓) those items under each of the eight factors if the characteristic is observed *only occasionally.*

Do not check (leave blank) any item under each of the eight factors if the characteristic is *seldom or never observed.*

1. The student is a FLUENT thinker:

____The student who thinks of a number of answers when a question is asked.

____The student who draws several pictures when asked to only draw one.

____The student who usually has several ideas about something instead of only one.

____The student who asks many questions.

____The student who uses a large number of words when expressing himself or herself.

____The student who is the fastest worker in the class, who produces more than others do.

*This scale has been researched and designed using the eight factors of the Williams Cognitive-Affective Interaction Model of student behaviors taken from his *TOTAL CREATIVITY PROGRAM* kit, Educational Technology Publications, Inc., 140 Sylvan Ave., Englewood Cliffs, N.J. 07632.

2. The student is a FLEXIBLE thinker:

____The student who thinks of various ways to use an object other than its common use.

____The student who has different interpretations of a picture, story, poem, or problem.

____The student who can apply a principle or concept in subjects other than the one in which it was introduced.

____The student who shifts and can take another point of view or considers situations differently from others.

____The student who will have a variety of ideas without sticking to only one.

____The student who thinks of a number of different possibilities for solving a problem.

3. The student is an ORIGINAL thinker:

____The student who likes objects in a room placed off-side or prefers asymmetry in drawings and designs.

____The student who is dissatisfied with the common answer and instead seeks a fresh approach.

____The student who is a nonconformist and cannot help being different by having a new twist in thinking about things.

____The student who enjoys the unusual and dislikes doing things the way everyone else does them.

____The student who, after reading or listening to a problem, will go to work inventing a new solution.

____The student who will question the old way and try to figure out a new way.

4. The student is an ELABORATIVE thinker:

____The student who will add lines, color, and details to his or another student's drawing.

____The student who senses a deeper meaning to an answer or solution by producing more detailed steps.

____The student who takes off with someone else's idea and changes it or adds on to it.

____The student who will want to "jazz up" or embellish upon the work or ideas of others.

____The student who is not interested in things that are plain and attempts to add details to make them more beautiful or exciting.

____The student who senses something lacking in his or her productions or creations and adds on details to improve them.

5. The student is CURIOUS and INQUISITIVE by nature:

____The student who questions everything and everyone.

____The student who loves to explore mechanical things.

____The student who is constantly searching for new ways or new ideas.

____The student who continually explores books, games, maps, pictures, etc.

____The student who needs no real push to explore something unfamiliar and exploration is a natural part of his or her behavior.

____The student who is sensitive to problems and alert to details that produce possible solutions.

6. The student is IMAGINATIVE and can visualize or dream about things that have never happened to him or her:

____The student who likes to tell stories about places he or she has never been.

____The student who can predict what someone else has said or done without ever knowing that person.

____The student who dreams about things without ever leaving the room.

____The student who likes to imagine things he has never seen.

____The student who can see things in a picture or drawing that no one else has seen.

____The student who can wonder about something that has never happened.

7. The student is COMPLEX by nature and likes to tackle difficult problems or tasks:

____The student who becomes intrigued with intricate or complicated situations.

____The student who likes to delve into the most involved task.

____The student who wants to figure things out for himself or herself without help.

____The student who enjoys things harder to do than others.

____The student who thrives on trying again and again in order to gain success.

____The student who seeks more difficult answers rather than accepting an easy one.

8. The student is COURAGEOUS and a RISK TAKER, not afraid of failure or criticism:

____The student who will defend his or her ideas regardless of what others think.

____The student who will set high goals of accomplishment and not be afraid of trying to reach them.

____The student who will admit to a mistake or failure.

____The student who really likes trying something new and is not easily influenced by his or her friends.

____The student who is not concerned by disapproval from classmates, teachers, or parents.

____The student who prefers to take a chance or dare just to see where it will take him or her.

Following are four (4) open-ended questions that will allow you an opportunity to express your reactions about a student and a program for gifted and talented in your own words. Make your statements brief but specific.

Do you think this student is or may be gifted? ____ Yes ____ No (check one)
If yes, why? _____

_____

_____

If no, why not? _____

_____

_____

Do you think this student is creative? ____ Yes ____ No (check one)
If yes, report briefly what he or she does in a creative way _____

_____

_____

_____

What do you expect from a school program for gifted and talented students?

_____

_____

_____

What would you like to see accomplished as a result of a student's participation in a program for the gifted and talented? _____

_____

_____

_____

_____

Scoring and Interpreting the Scale. Add the number of double checked (✓✓) items and multiply this sum by two (2). These are double weighted items which should receive two points each. Add the number of single checked (✓) items. These receive one point (1) each. The four open-ended questions at the end of the scale receive one (1) point each if answered "yes" with reasons or comments. This is a quantitative score just for being answered, but the quality of the remarks can help those designing programs for the gifted and talented as suggestions of expectations from teachers or parents.

Number of double checked items _____ x 2 = _____

Number of single checked items _____ x 1 = _____

Number of open-ended items answered _____ x 1 = _____

SUM _____

Total Score

Students with the highest scores can be ranked on a scale of 100 since there are a possible 100 points for the total score.

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